

## **ABSTRACT**

**Method of modulation and demodulation of a digital signal, in particular in a frequency band affected by flat fading, associated modulator and demodulator**

Broadcasting on the FM band presents a major drawback in respect of digital transmission by virtue of a propagation problem called spatial fading or flat fading.

The invention proposes a method of modulating a digital signal of width  $L$  in frequency on a given useful frequency band characterized in that it comprises the following steps:

- a separation of the digital signal into  $N$  blocks  $b_n$  ( $1 \leq n \leq N$ ),
- a splitting of the given useful frequency band into  $N$  contiguous parts  $P_n$ ,
- a definition of channels  $C_n$ , of width  $l_n$  in frequency, lying within an associated part  $P_n$ , the channels  $C_n$  being separated,
- a distributing of each block of digital signals  $b_n$  over the associated channel  $C_n$ .

[Figure 1]